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Cont'd

(ii) a mercapto alkanol ester of a monocarboxylic acid.

REMARKS

Claims 193-198, 200-207, 209-217, 219-225, 227-233, and 237-323 are presently pending in this application.

Claims 247 and 296 have been amended to recite that the ingredients are mixed in amounts effective to stabilize vinyl halide resins.

The Examiner's informative telephone conference with James Monroe is gratefully acknowledged. Careful consideration of the Examiner's comments and suggestions was made and claims 247 and 296 were amended in view thereof. However, further amendments are not warranted in view of the cited prior art. For the reasons discussed below, Applicants are entitled to their U.S. priority date; thus the amendments suggested by the Examiner to overcome the prior art are not necessary because none of the references relied on by the Examiner is prior art.

For the reasons set forth in applicants' amendments dated February 9, 1989, April 5, 1990, and April 17, 1991, all pending claims are entitled to a priority date based upon the original U.S. Patent Application Serial No. 070,503 filed August 28, 1979 in accordance with 35 U.S.C. §§ 112 & 120. Since all of applicants' claims are entitled to a U.S. filing date of August 28, 1979, none of the references relied upon by the Examiner in the last Office Action (October 18, 1991) is prior art to the present claims.

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FINNEGAN, HENDERSON
FARABOW, GARRETT
& DUNNER

1300 I STREET, N. W.
WASHINGTON, DC 20005
1-202-408-4000

Vas-Cath Inc. v. Mahurkar, 935 F.2d 1555, 1563, 19 U.S.P.Q.2d 1111, 1116 (Fed. Cir. 1991), sets forth what is required to rely on a parent application under 35 U.S.C. § 120.

The test for sufficiency of support in a parent application is whether the disclosure of the application relied upon reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter.

As discussed below, applicants clearly had possession of the presently claimed invention at the filing date of parent application Serial No. 070,503.

All of the present claims have a common denominator: (i) a mono- or diorganotin compound wherein at least one atom bonded to tin is sulfur or a halogen and (ii) a mercapto alkanol ester of a monocarboxylic acid. There is clear support in Serial No. 70,503 for the mercapto alkanol ester of a monocarboxylic acid. For instance, page 3, line 5, through page 5, line 3, of the parent application describes these esters both in broad and specific terms. The use of the mercapto alkanol ester as set forth in the present claims is what applicants have always considered to be their invention. Applicants clearly state this at page 1 of the parent application, paragraph 1, and the paragraph bridging pages 2 and 3.

The mercapto alkanol esters are added to a mono- or diorganotin compound wherein at least one atom bonded to tin is sulfur (e.g., claim 247) or a halogen (e.g., claim 296). These organotin compounds were considered by applicants to be old and well-known in the art for stabilization of vinyl halide resins.

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FARABOW, GARRETT
& DUNNER

1300 I STREET, N. W.
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In fact, applicants' invention improves the effectiveness of these organotin compounds for the stabilization of vinyl halide resins.

Applicants clearly regarded organotin stabilizers to be well known as evidenced in Serial No. 070,503. At page 1, lines 19-23, of the specification, applicants state:

Stabilization by the addition of various tin compounds is well-known and has given rise to an abundant literature. The compounds which have given considerable satisfaction are organic derivatives containing both tin and sulphur.

At page 5, lines 4-9, applicants discuss their discovery that the addition of the esters according to the invention along with known tin compounds improves stabilization results over the tin compounds alone. Furthermore, the stabilization occurs with a considerable saving (20 to 95%) of the quantity of tin used. The Examiner is also referred to page 6, lines 12-24 that discusses the improvement obtained by the addition of the mercapto alkanol esters.

The new additives allow reduction of the discoloration of resins during heating. They also permit counteraction of the increase in viscosity which is caused by the addition of tin stabilizers. These two effects can be obtained simultaneously. It is an important advantage, particularly as known tin stabilizers are not capable in general of producing these two effects together.

The specification therefore clearly demonstrates that applicants considered their invention to be the addition of mercapto alkanol esters of a monocarboxylic acid.

Furthermore, the examples of the parent application specifically indicate that applicants considered the organotin stabilizers to be conventional. Example 3 uses a standard diorganotin

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FARABOW, GARRETT
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stabilizer, di-n-octyltin-bis-(isooctyl-mercapto-acetate), which is a diorganotin containing two sulfurs bonded to the tin. Example 4 is directed to the standard tin stabilizer or a condensation polymer of butyl stannic and butyl thiostannic acids represented by the formula $(\text{BuSnO}_{1.5})_m \cdot (\text{BuSnS}_{1.5})_n$. Note that both sulfur-tin and oxygen-tin bonds are present. Example 8 is directed to a di-n-butyltin-bis(isooctyl-mercapto acetate). Applicants stress throughout the examples that the organotin stabilizers used are standard. Thus, the examples fully support applicants' position that the invention is the addition of the mercapto alkanol esters to known organotin stabilizers.

In summary, there was no need to include more specific information concerning the organotin stabilizers because such stabilizers were well recognized in the art. Rather, the invention focused on the addition of the claimed mercapto alkanol esters to significantly improve the stabilization effects of organotin compounds on vinyl halide resins.

To further show that the originally filed specification, Serial No. 70,503, provides § 112, ¶ 1, support for the present claims, applicants are filing a number of documents which indicate that the claimed organotin stabilizers were extremely well known in the art at the time of the present invention. These documents emphasize the well known nature of the claimed organotin stabilizers.^{1/} The documents are merely cumulative of the state of the organotin art at the time of the claimed invention and are not

^{1/} Also submitted is Form PTO 1449.

intended to overwhelm the Examiner.

None of the documents teaches or suggests the addition of mercapto alkanol esters to organotin compounds to stabilize vinyl halide resins as claimed in the present invention. Thus, the present claims are patentable over these documents. Attention is particularly drawn to the following documents.

Reissue Patent 30,338 was originally filed as U.S. Serial No. 638,658 on May 3, 1967 and issued as U.S. Patent 3,632,538. This patent discloses the addition of organotin stabilizers for polyvinyl chloride resins. Both diorganotin sulfides and monoorganotin sulfides are disclosed. The Examiner is requested to consider the variety of structures these organotin compounds have as disclosed in column 2, line 54, through column 3, line 43, and column 6, line 48, through column 9, line 63.

U.S. Patent 2,789,963 discloses several organotin compounds that have both sulfur and oxygen bonds. U.S. Patent 3,830,751, in columns 8-11, provides a list of many stabilizing compounds including organotin mercaptocarboxylates and organotin mercaptides. U.S. Patent 3,925,309 (which is a divisional of U.S. Patent 3,887,519, already before the Examiner) is directed to dimethyltin ester stabilizers for vinyl halide polymers. This patent discloses tin being bonded to sulfur, oxygen and chlorine in a variety of combinations with a variety of substituents attached to the sulfur and oxygen. Attention is directed to columns 1 and 2.

These patents represent the variety of organotin compounds available at the time of the present invention. Furthermore, these patents demonstrate both mono and diorganotin compounds with

at least one bond to sulfur or a halogen. Finally, these patents demonstrate that other substituents may be bonded to tin such as oxygen and oxygen substituents, in addition to sulfur or halogen.

Applicants have satisfied the burden under 35 U.S.C. §§ 120 and 112, first paragraph, that there is adequate disclosure in the parent application to show that applicants had full possession of the claimed invention. One of ordinary skill in the art could clearly make and use the claimed invention based on the parent application. Since this burden has been satisfied, applicants are entitled to the priority date (August 28, 1979) of Serial No. 070, 503 and the documents cited in the Examiner's rejections have been effectively removed as prior art.

In the Examiner's comments, the Examiner appears to be troubled by U.S. Patent No. 4,021,409 to Gough et al. that is directed to organotin borates. Gough et al. discusses the addition of mercapto alkanol esters to organotin borates for the stabilization of vinyl halide resins. The claims of the present invention do not include organotin borates as set forth in Gough because the present claims require either at least one sulfur or halogen bonded to the tin. Gough does not contain any teaching or suggestion to use any organotin compounds except for organotin borates and therefore does not teach or suggest the claimed invention.

As discussed above, Applicants are entitled to protection of claims containing organotin stabilizers having a sulfur or halogen bonded to the tin. Applicants rely on the abundance of literature available which substantiates Applicants' claim that organotin

stabilizers were well known at the time of the present invention. Applicants clearly set forth that conventional, standard and well-known organotin compounds are used in the present invention.

Applicants are entitled to exclude the organotin borates from the claimed invention. There is no evidence that the organotin borates as set forth in Gough are equivalent to the organotin compounds of the present invention. Furthermore, applicants are not aware of any art which would motivate one of ordinary skill in the art to substitute a tin stabilizer as claimed in the present invention for the organotin borate of Gough.

Finally, applicants draw the Examiner's attention to the discussion of mercaptoborates on pages 20 and 21 of the text The Development of the Organotin Stabilizers submitted herewith. These compounds contain a sulfur bonded to tin but do not contain an oxygen borate bonded to tin as in Gough. Although these compounds would fall within the scope of Applicants' claimed invention, but not within the scope of Gough, there is no teaching or suggestion of a mercapto alkanol ester as in the claimed invention.

It is respectfully requested that the Examiner reconsider her position, withdraw the rejections over the prior art, and issue the pending claims.

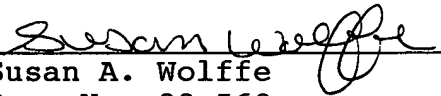
CONCLUSION

If there are any fees due in connection with the filing of this Supplemental Preliminary Amendment not accounted for, please charge such fees to our Deposit Account No. 06-0916. If an extension of time not accounted for is required for entry of this

Preliminary Amendment, such extension is hereby requested, and the requisite fee also should be charged to our Deposit Account.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW
GARRETT & DUNNER

By 
Susan A. Wolfe
Reg. No. 33,568

Date: November 17, 1992

LAW OFFICES

FINNEGAN, HENDERSON
FARABOW, GARRETT
& DUNNER

1300 I STREET, N. W.
WASHINGTON, DC 20005
1-202-408-4000